

MX5X User's Guide

(Microsoft® Windows® CE .NET 4.2 / CE 5.0 Equipped)

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E-EQ-MX5CEOGWW-F-ARC



Language: English

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Li-Ion Battery:

When disposing of the MX5X main battery, the following precautions should be observed: The battery should be disposed of properly. The battery should not be disassembled or crushed. The battery should not be heated above 212°F (100°C) or incinerated.

The user is strongly encouraged to read *Appendix B - Regulatory Notices and Safety Information*. Important safety cautions, warnings and regulatory information is contained in Appendix B.

	Inspect enclosure for signs of deterioration such as cracking, warping, swelling or softening. Do not use the MX5 Intrinsically Safe mobile device in Hazardous (Classified) Locations if there are any signs of deterioration.
	Important: This symbol is placed on the product to remind users to dispose of Waste Electrical and Electronic Equipment (WEEE) appropriately, per Directive 2002-96-EC. In most areas, this product can be recycled, reclaimed and re-used when properly discarded. Do not discard labeled units with trash. For information about proper disposal, contact LXE through your local sales representative, or visit www.lxe.com .

Revision Notice

Removed MX5 PocketPC.

Added “*Note: The External Power Supply for MX5X is not approved for sale in China*”.



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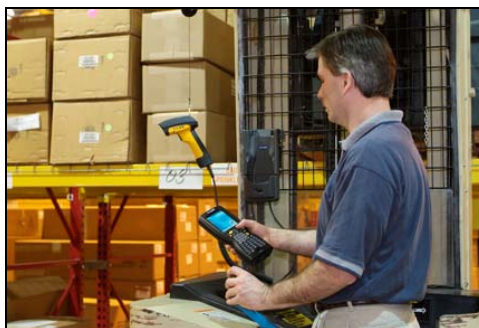
Introduction

Overview

Note: At the bottom of the MX5X is a label that indicates the operating system resident on the mobile device. This guide is directed toward an MX5X with Windows CE on the label.

The LXE® MX5X is a rugged, portable, hand-held Microsoft® Windows® CE .NET 4.2 or CE 5.0 equipped mobile computer capable of wireless data communications. The MX5X can transmit information using a 2.4 GHz wireless client (with dual internal antennas) and it can store information for later transmission using an RS-232 serial port, Ethernet, RF, IRDA or a USB port.

The MX5X is vertically oriented and features backlighting for the display and the keypad. The touch-screen display supports graphic features and icons that the Windows operating system supports. A stylus is attached to the MX5X to assist in entering data and configuring the unit.



The MX5X is powered by a 2800 mAh Lithium-Ion main battery pack and an internal backup battery.

MX5X Hazardous Location unit can be distinguished from the standard MX5X by the blue keypad overlay and the safety approval labeling on the back of the unit. The MX5X that is approved for use in Hazardous Locations does not accept tethered scanner or external power connection. See section titled *Identify Your Device*.

Warning: Standard MX5X units are not approved for Hazardous Location use.

Note: Until the main battery and backup battery are completely depleted, the MX5X is always drawing power from the batteries (On). This unit is to be used with a power supply(LXE P/N MX5A305PSACUS / MX5A305PSACWW).

*Note: If the mobile device has AppLock installed, please refer to the **MX5X Reference Guide** for AppLock setup and processing information before continuing.*

Identify Your Device

At the front bottom of the MX5X is a label indicating the operating system resident on the mobile device. This document is one in a series covering the MX5X family of computers:



Label : Windows CE .NET

- For MX5X computers equipped with Microsoft Windows CE .NET 4.2 or CE 5.0 Operating Systems:

MX5X User's Guide

MX5X Reference Guide

LXEbook -- MX5X User's Guide (can be downloaded to the mobile device from the LXE Manuals CD.)



Label : I-SAFE

- For MX5 Intrinsically Safe (MX5-IS) computers equipped with Microsoft Windows CE .NET 4.2 or CE 5.0 Operating System:

MX5 Intrinsically Safe User's Guide

MX5X Reference Guide

LXEbook -- MX5 I-Safe User's Guide (can be downloaded to the device from the LXE Manuals CD.)

The MX5 Intrinsically Safe Hazardous Location unit (MX5-IS) is distinguished from the standard MX5X by the blue keypad overlay and the safety approval labeling on the back of the device. Please refer to the *MX5 Intrinsically Safe User's Guide* for cautions, warnings, explanation and instruction when using the MX5-IS device.

Warning: Standard MX5X units, powered cradles, tethered scanners, multichargers, USB devices, headsets and external power supplies are not approved for Hazardous Location use.

Figure 1 MX5 Mobile Devices

The following guides are interchangeable for MX5X and MX5-IS devices (except where noted in the guides):

- MX5 Cradle Reference Guide
- MX5 Multi-charger Reference Guide
- MX5 Belt Battery System (LXE suggests using this accessory specifically with a Low Temperature MX5X.)

Do not use the MX5 Belt Battery System with an MX5-IS in a hazardous location.

MX5X Features

New features affect user interaction and internal operation of the MX5X.

The appropriate wireless client utility for your device configuration has been pre-installed by LXE and the utility icon is displayed on the desktop.

	Windows® CE .NET 4.2	Windows® CE 5.0	Optional?
Summit® Client Utility	x	x	No
Aironet® Client Utility (Cisco)	x	-	No
Symbol® Client Utility	x	-	No
MX5X I-SAFE	x	x	Yes
SE1223 Integrated Laser Scanner	x	x	Yes
SE1224 Integrated Laser Scanner	x	x	Yes
SE2223 Integrated Laser Scanner	x	x	Yes
400MHz	x	x	No
64MB RAM	x	x	No
Type I/II Compact Flash slot	x	x	No
ATA Compact Flash slot	x	x	No
Charging/Communication Cradles	x	x	Yes
Wavelink® Avalanche® Enabler	x	x	Yes
RFTerm®	x	x	Yes
JAVA®	x	x	Yes
Single AppLock	x	x	Yes
Multi AppLock	x	x	Yes

Document Conventions

ALL CAPS	All caps are used to represent disk directories, file names, and application names.
Menu Choice	Rather than use the phrase "choose the Save command from the File menu", this manual uses the convention "choose File Save".
"Quotes" or <i>Italics</i>	Indicates the title of a book, chapter or a section within a chapter (for example, "Document Conventions" and <i>Document Conventions</i>).
< >	Indicates a key on the keypad (for example, <Enter>).
	Indicates a reference to other documentation.
ATTENTION	Keyword that indicates vital or pivotal information to follow.
	Attention symbol that indicates vital or pivotal information to follow. Also, when marked on product, means to refer to the manual or operator's guide.
	International fuse replacement symbol. When marked on the product, the label includes fuse ratings in volts (v) and amperes (a) for the product.
<i>Note:</i>	Keyword that indicates immediately relevant information.
CAUTION 	Keyword that indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
WARNING 	Keyword that indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
DANGER 	Keyword that indicates a imminent hazardous situation which, if not avoided, will result in death or serious injury.

MX5X Environmental Specifications

Feature	Specification
Operating Temperature	-6°F to 140°F (-21°C to 60°C) [non-condensing]
Extended Op Temperature	-22°F to 122°F (-30°C to 50°C) [non-condensing] w/Heater option ¹
Storage Temperature	-60°F to 160°F (-51°C to 71°C) [non-condensing]
Rating	IEC IP67
Operating Humidity	5% to 90% non-condensing at 104°F (40°C)
Vibration	Based on MIL Std 810F

¹ If the MX5X has a dead main battery and is as cold as the extended operating temperature's lowest value, the unit must be warmed to above -20°C (-4°F) before installing a new main battery pack and pressing the On button.

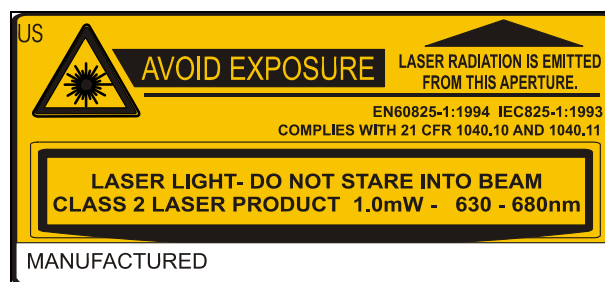
Laser Warnings and Labels

- Do not look into the laser's lens.
- Do not stare directly into the laser beam.
- Do not remove the laser caution labels from the MX5X.
- Do not connect the laser barcode window to any other device. The laser barcode window is certified for use with the MX5X only.

Caution: 	<i>Laser radiation when open. Please read the caution labels.</i> <i>Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.</i>
--	---



Figure 2 CDRH / IEC 825 Caution Label Location – Back



Class 2 Label

Figure 3 Caution Label - Scanner

Quick Start

*Note: When your MX5X is pre-configured, the wireless client, flash card and scanner are programmed by LXE to your specifications. The sequence of steps in **Quick Start** must also be completed when the MX5X returns from a Cold Reset and when a new OS version is loaded. The wireless client, flash card, virtual keyboard and scanner parameters may also need to be reset after a cold reset.*

This section's instructions are based on the assumption that your new system is pre-configured and requires only accessory installation (e.g. handstrap) and a power source. LXE recommends that installation or removal of accessories be performed on a clean, well-lit surface. When necessary, protect the work surface, MX5X, and components from electrostatic discharge.

In general, the sequence of events is:

Windows CE .NET 4.2



MX5X Desktop CE Indication

1. Insert a fully charged battery. (Always put a fully charged battery in the MX5X at the beginning of the shift or workday.)
2. Connect an external power source to the unit (if available).
3. If the screen does not automatically display, tap the **Power** key.
4. Press < N > when the message **Update Micro/Boot? Y/N** (*timer countdown*) is displayed, or, let the timer count down.
5. Calibrate the touchscreen.

After all files are loaded and the Desktop is displayed, adjust audio volume and other parameters if desired. If needed, change the Time and Date from it's default value by tapping the  | **Settings** | **Control Panel** | **Date/Time** icon.

Windows CE 5.0



MX5X Desktop CE Indication

1. Insert a fully charged battery. (Always put a fully charged battery in the MX5X at the beginning of the shift or workday.)
2. If the screen does not automatically display, tap the Power key.
3. Calibrate the touchscreen.

After all files are loaded and the Desktop is displayed, adjust audio volume and other parameters if desired.

If needed, change the Time and Date from it's default value by tapping the  | **Settings** | **Control Panel** | **Date/Time** icon.

Start-up Troubleshooting

Can't align the screen, change the date/time or adjust the volume.	AppLock is installed and running on the mobile device. AppLock restricts user access to the control panels. See the <i>MX5X Reference Guide</i> for AppLock setup and processing information..
RFTerm® opens and runs upon each cold reset and warm reset.	Tap File Exit to close the RFTerm application. RFTerm runs by default after rebooting.
Touch screen won't accept stylus taps.	Touchscreen may have been disabled or the touchscreen may require recalibration. Hold down the Power key and the Orange key for 4+ seconds to warmboot the device. Force the Start menu to appear by pressing the right arrow key and the Blue key to access Start button options, then use the arrow keys to select menu options (e.g. Start Settings).



To set up the integrated scanner **barcode reading parameters**, please refer to the *Integrated Scanner Programming Guide* on the LXE Manuals CD or the LXE ServicePass web page. Your device may have an integrated SE1223, SE1224 or SE2223 scan engine.

Important Battery Information

Important: *If the main battery has been out of the MX5X for an extended period of time or becomes fully discharged or dead, a fully charged backup battery will last for up to 24 hours. If this happens, the device will cold reset the next time power is applied from either AC power or a charged main battery. A cold reset will cause loss of data and custom programs. Always store unused MX5's with a fully charged main battery pack installed. The MX5X requires periodic connection to an external power source to maintain an optimum backup battery charged status.*

- Until the main battery and backup battery are completely depleted, the MX5X is always drawing power from the batteries (On).
- New batteries must be fully charged prior to use. ²
- Whenever possible, use the AC power adapter with the MX5X to conserve the main battery and charge the backup battery.
- When a new battery is installed in the MX5X for the first time (or when the backup battery is completely depleted), the Time and Date reverts to it's default values.

Li-Ion Battery

When disposing of the MX5X main battery, the following precautions should be observed: The battery should be disposed of properly. The battery should not be disassembled or crushed. The battery should not be heated above 212°F (100°C) or incinerated.

² If the MX5X has a dead main battery and is as cold as the extended operating temperature's lowest value, the unit must be warmed to above -20°C (-4°F) before installing a new main battery pack and pressing the On button.

Components



Figure 4 Front of MX5X Device

1	Scanner Housing	4	Keypad
2	Microphone	5	Power Key
3	Touchscreen	6	Speaker



Figure 5 Scan Aperture and Audio Jack

1 Scan Aperture

2 Audio Jack



Figure 6 Ports

1 COM 1 -- RS-232, USB,
Ethernet and AC Power
Connection

2 COM 3 -- IR Port

3 COM 4 -- RS-232 and AC
Power Connection



Figure 7 Back w/Optional Handle or Hand Strap

- | | | | |
|---|--------------------------|---|------------------|
| 1 | Scanner | 4 | Trigger |
| 2 | Stylus and Stylus Pocket | 5 | Battery Fastener |
| 3 | Trigger Handle | 6 | Main Battery |



Figure 8 Handle (Optional)

- | | | | |
|---|---------------|---|--------|
| 1 | Scan Aperture | 3 | Handle |
| 2 | Trigger | | |

Insert Main Battery

The Battery Compartment is located at the bottom of the back of the computer. The fasteners in the main battery Pack are connected to the Battery Pack. Press the Power key after the battery is inserted into the MX5X³.

Note: On first use the battery pack should be charged with an external power source (i.e. AC Adapter) – 3 hours for the main battery and 7 hours for the backup battery. New main battery packs alone must be charged prior to first use -- this process takes up to four hours in an LXE Multi-Charger.

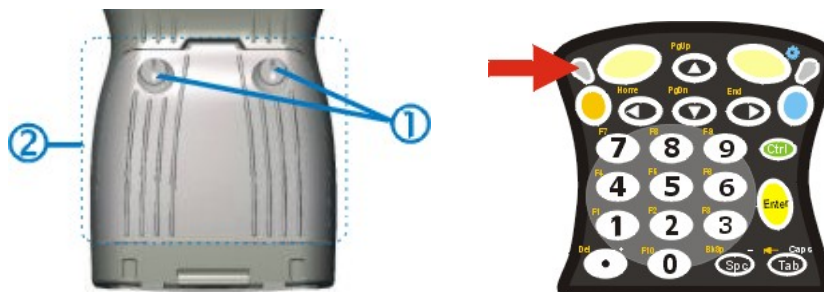


Figure 9 Main Battery Pack and Battery Charging LED

1 Battery Pack Fasteners 2 Battery Pack

Note: Using the battery removal tool (or a coin) twist each fastener to the left to loosen the battery pack. Twist the fastener to the right to tighten the battery pack.

Place the battery in the battery well, making sure the tabs on the bottom of the battery pack fit into the slots at the bottom end of the battery well. Push the battery down into the battery well while fastening the screws.

Fasten the screws tight enough to allow the rubber gasket to create a watertight seal. If the screws do not easily twist into the threaded opening, remove the battery pack and repeat the process.

When the main battery pack is charging, the Battery Charge LED flashes green. The Battery Charge LED is located above the Orange key. The backup battery is trickle-charged by the main battery. There is no backup battery charging indicator.

Whenever possible, use the AC power adapter with the MX5X to conserve the main battery and charge the backup battery.

³ If the MX5X has a dead main battery and is as cold as the extended operating temperature's lowest value, the unit must be warmed to above -20°C (-4°F) before installing a new main battery pack and pressing the On button.

Power Key

Note: Refer to the section titled **Power Modes** in the **MX5X Reference Guide** for information relating to the power states of the MX5X.

The Power key is located next to the <Z> key on the keypad. When a battery is inserted in the MX5X for the first time press the Power key.

Tapping the Power key places the MX5X immediately in Suspend mode. Tapping the Power key again, or connecting to AC power, immediately returns the MX5X from Suspend.



Figure 10 Power Key Location

Reboot Sequence

When the Windows desktop is displayed or an application begins, the power up (or reboot) sequence is complete. If you have previously saved your settings, they will be restored on reboot. Application changes are saved when OK is clicked on an application applet.

Warm Reset

Hold down the Power key and the Orange key for 4+ seconds until the display blanks, then release the keys. A warm reset does not affect the operating system and no data loss occurs.

Cold Reset

Hold down the Power key, the Blue key and the Orange keys for 4+ seconds. The MX5X will power off, release the keys and the device will power on again.

Calibrating the touchscreen will need to be performed when the MX5X powers on again.

If needed, change the MX5X Time and Date from it's default values by tapping the  | **Settings** | **Control Panel** | **Date/Time** icon.

Important:-- Because of the extreme nature of the Cold Reset, LXE recommends that the Cold Reset be used only as an emergency procedure and the Warm Reset be used whenever necessary.

LXE recommends the RegSave file be run when configuration changes are made.

Note: When performing a Cold Reset on this device, the system will ask if you want to overwrite files –LXE recommends selecting **No** and continuing with the Cold Reset process.

Connect External Power Supply

Note: LXE highly recommends using the MX5X connected to AC power whenever possible.

The MX5X receives AC/DC power from the US AC/DC 12V Power Supply or when docked in a powered MX5 Cradle.

The MX5X accepts the power cable in either COM 1 or COM 4 port. The MX5 cradle accepts the power cable in the port marked **Power** at the back of the cradle.

The A/C power cable is not included with the Power Supply, please contact your LXE representative for replacement power cables. When the power cable is connected to a wall outlet and the Power Supply, the ON indicator on the Power Supply illuminates green.



Figure 11 AC/DC 12V External Power Supply

Note: The External Power Supply for MX5X is not approved for sale in China.

1. Squeeze the sides of the power connector and push the power cable connector into either MX5X port until a click is heard. The click means the connector is seated firmly.
2. The MX5X CHGR LED above the keypad illuminates when the device is receiving external power through the COM port connected to the power supply.

The main battery recharges when the MX5X is connected to an external power source.

Note: When the MX5X is receiving power through a cradle connected to external power the MX5's CHGR LED is illuminated. When the MX5X is connected to an external power supply, and the main battery pack is charging, the Battery Charge LED flashes green.

Connect Audio Jack (Optional)

The MX5X audio jack is located on the top of the unit next to the scan aperture.

The internal speaker is disabled when the audio jack is connected.



Figure 12 Connect Audio Jack

Insert the barrel end of the connector into the MX5X audio jack and push in firmly.

Note: The audio option draws power from the Battery Pack.

Install Pistol Grip Handle (Optional)

The MX5X can be purchased with a customer-installable pistol grip handle. The handle enables the user of the MX5X to hold the device while pointing and activating the scanner with one hand. Pressing the trigger activates the laser scanner and functions the same as the Scan key on the keypad. With the handle installed the Scan key on the keypad remains active. The trigger duplicates the function of the Scan key.

The handle is built of a durable and flexible plastic that will not detach from the MX5X if the unit is dropped.

The trigger handle is a mechanical device. Battery or external A/C power is not required for operation of the trigger handle. The trigger handle does not need to be removed when replacing the Battery Pack.

Either the trigger handle is attached to the MX5X or the handstrap is attached, not both.

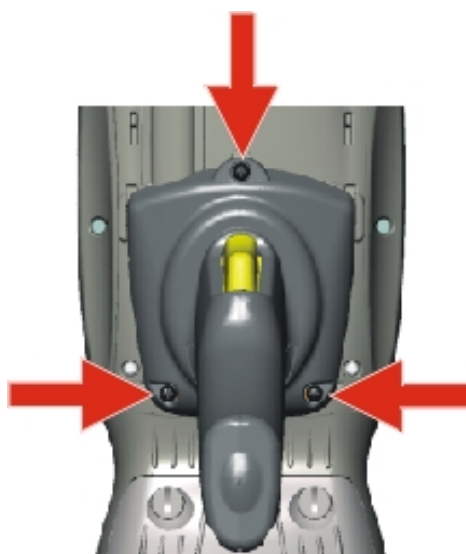


Figure 13 Trigger Handle Attach Points

Handle Installation

1. Place the MX5X, with the screen facing down, on a flat stable surface.
2. Slip the L-shaped plastic hooks, at the top of the handle, into the slots on each side of the back of the MX5X and slide the handle downward until the screw holes are visible.
3. Attach the pistol grip handle to the MX5X (as shown above) with the set of three screws and washers provided.
4. Test the handle's connection making sure the MX5X is securely connected to the handle.

Periodically check the pistol grip handle for wear and the connection for tightness. If the handle gets worn or damaged, it must be replaced. If the pistol grip connection loosens, it must be tightened before the MX5X is placed in service.

Install Handstrap (Optional)

Note: Either the trigger handle is attached to the MX5X or the handstrap is attached, not both. LXE recommends that, in the absence of a trigger handle, the handstrap be used at all times.

An elastic hand strap is available for the MX5X. Once installed, the hand strap provides a means for the user to secure the computer to their hand. It is adjustable to fit practically any size hand with or without workgloves and is easily moved aside to allow installation or removal of the main battery pack.



Figure 14 MX5X With Handstrap Installed

Installation

1. If a handle is installed, remove it at this time. See section *Install Pistol Grip Handle*.
2. Slip the strap through the upper bracket prior to securing the upper bracket to the unit.
3. When slipping the strap through the bracket make sure the closed loop fastener surface is up.
4. After slipping the strap through the bracket, fold the strap over so that the two closed loop fastener surfaces mate evenly.
5. Prior to securing the upper bracket to the unit, slide the bottom assembly into the slots at the bottom of the MX5X. Make sure that both ends of the bottom assembly are securely installed.
6. After securing the bottom of the strap to the MX5X, loosen the closed loop fastener strap and then secure the upper bracket to the unit with a screw(s).

Removal

1. Separate the closed loop fastener tabs and loosen the strap through the upper bracket.
2. Using a Phillips screwdriver, remove the upper bracket screw(s).
3. Pull the bottom assembly from the slots in the bottom back of the MX5X.

Slide the bottom bracket out and away from the MX5X when replacing the Battery Pack.

Periodically check the handstrap for wear and the connection for tightness. If the handstrap gets worn or damaged, it must be replaced. If the handstrap connection loosens, it must be tightened before the MX5X is placed in service.

Tapping the Touchscreen with a Stylus

Note: Always use the point of the stylus for tapping or making strokes on the display. Never use an actual pen, pencil, abrasive or sharp object to write on the touch screen.

Hold the stylus as if it were a pen or pencil. Touch an element on the screen with the tip of the stylus then remove the stylus from the screen. Firmly press the stylus into the stylus holder on the back of the MX5X when the stylus is not in use.

In the same manner as using a mouse to left-click icons on a desktop/laptop computer screen, using the stylus to tap icons on the MX5X display is the basic action that can:

- Open applications
- Choose menu commands
- Select options in dialog boxes or drop-down boxes
- Drag the slider in a scroll bar
- Select text by dragging the stylus across the text
- Place the cursor in a text box prior to typing in data or retrieving data using the integrated barcode scanner or an input/output device connected to the serial port.
- A mouse right-click is performed by holding the stylus down on the touch screen. A circle of dots appear and then the right-click operation can be performed. See Note.

Note: A 'right mouse click' function must be programmed by the customer to accept a constant stream of left mouse click messages. An application can choose to interpret this stream of messages as a right mouse click. LXE does not support non-LXE application programming.

An extra or replacement stylus can be ordered from LXE. See the section titled *Accessories* for the stylus part number.

Keypad Shortcuts

Use these keyboard shortcuts instead of the stylus:

- Press <Tab> and a <Left> or <Right Arrow> key to *select a file*.
- Press <Shift> and an <Up> or <Down Arrow> key to *select several files*. Press <Shift+Arrow>, then <Shift+Arrow> again for each additional file selected.
- Once you've selected a file, press <Alt> then press <Enter> to open its *Properties dialog*.
- Press <Orange> then press <numeric dot> to *delete* the currently highlighted file(name). Or, tap and hold the stylus on the filename and a 'right-click' menu box with a Delete option appears.

Check Battery Status

Tap the  | **Settings** | **Control Panel** | **Power** icon. Main battery level, status and other details are displayed.

Backup battery status is not displayed as the backup battery is continually charging and discharging. It is charging when the main battery pack is installed and discharging whenever the

main battery pack is removed. The backup battery is re-charged using AC power only; it does not use main battery power to re-charge.

Entering the Multi AppLock Activation Key

*Note: The touch screen must be enabled. See the **MX5X Reference Guide, Chapter 6 - AppLock** for AppLock instruction.*

AppLock may be installed and running on the mobile device. AppLock restricts access to programs and the Windows CE Control Panel. Please contact your system administrator for instruction.

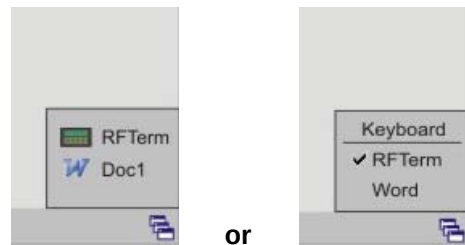


Figure 15 End-User Multi Applock Touch Panel Segment

A checkmark indicates applications currently active or available for Launching by the user. Previous versions used the program icon to indicate the same function. When Keyboard is selected, the MX5X default input method (Input Panel, Transcriber, or custom input method) is activated.

Using a Stylus Tap

When the mobile device enters end-user mode, a Switchpad icon (it looks like three tiny windows one above the other) is visible at the far right in the taskbar. The taskbar is always visible on top of the application in focus. *Note: If only one application is configured and the Input Panel is not enabled, the Switchpad icon is not displayed.*

When the user taps the Switchpad icon, a menu is displayed showing the applications available to the end-user. They can tap an application name in the popup menu and the selected application is brought to the foreground (in focus). The previous application continues to run in the background. Stylus taps affect the application in focus only. When the user needs to use the Input Panel, they tap the Keyboard option. Input Panel taps affect the application in focus only.

The figure shown above is an example and is shown only to aid in describing how the user can switch between applications using a stylus tap. The switchpad lists user applications as well as the Keyboard option.

Using the Switch Key Sequence

One switch key sequence (or hotkey) is defined by the administrator for the end-user to use when switching between locked applications. This is known as the **Activation key**. The Activation key is assigned by the Administrator using the Global Key parameter (the default Global Key is **Ctrl+Spc**). When the switch key sequence is pressed on the keypad, the next application in the AppLock configuration is moved to the foreground (in focus) and the previous application moves to the background. The previous application continues to run in the background. End-user key presses affect the application in focus only.

Note that the system administrator may have assigned a different key sequence to use when switching applications.

Toggle the Display and Keypad Backlight On and Off

Locate the **Blue** key at the top of the keypad. Toggle the keypad and display backlights on and off by pressing the **Blue key**, then the **Right Scan** key.

Increase or Decrease Keypad and Display Backlight Intensity

When the backlight is on, press the **Orange** key and the < 7 > key to decrease the intensity of the backlight. Repeating this keypress sequence continues to decrease the intensity of the backlight until the backlight is Off.

Once the backlight is off, use the **Blue** key and the **Right Scan** button keypress to toggle the backlight on. This process returns the backlight to it's brightest intensity.

Set the Display and Keypad Backlight Timers

*Note: Refer to the section titled **Power Modes** in the **MX5X Reference Guide** for information relating to the power states of the MX5X.*

Select  | **Settings** | **Control Panel** | **Display** | **Backlight** tab. Change the parameter values and tap OK to save the changes.

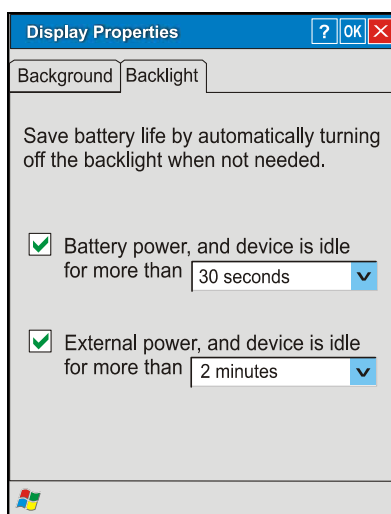


Figure 16 Display Properties / Backlight Tab

The first option affects the MX5X when it is running on battery power only. The second option affects the MX5X when it is running on external power (e.g. AC adapter, powered cradle). **The backlight will remain on all the time when both checkboxes are blank.**

The default value for the battery power timer is 1 minute.

The default value for the external power timer is 10 minutes. When the display wakes up, the Backlight timers begin the countdown again.

The backlight timer dims the backlight on the touchscreen at the end of the specified time and turns the keypad backlight off.

Set the MX5X Power Schemes Timers

Select  | **Settings** | **Control Panel** | **Power** | **Schemes** tab. Change the parameter values and tap OK to save the changes.

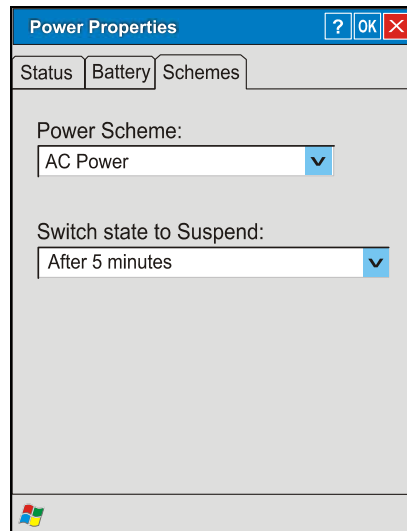


Figure 17 Power Schemes

Battery Power Scheme

Use this option when the MX5X will be running on battery power only.

Switch state to Suspend:

Default is After 3 minutes

AC Power Scheme

Use this option when the MX5X will be running on external power (e.g. AC adapter, powered cradle).

Switch state to Suspend:

Default is 5 minutes

Set The Audio / Speaker Volume

Note: An application may override the control of the speaker volume. Turning off sounds saves power and prolongs battery life.

The audio volume can be adjusted to a comfortable level for the user. The MX5X has an internal speaker and a jack for an external headset.

Using the Keypad

*Note:  | Settings | Control Panel | Audio must have the options below **Enable sounds for** enabled before the following key sequences will adjust the volume.*

To adjust speaker volume, locate the <V> key and the **Blue** key.

Adjust the speaker volume by pressing the:

- Blue key, then the <V> key to enter Volume change mode.
- Use the Up Arrow and Down Arrow keys to adjust volume until the speaker volume is satisfactory.
- Press the Enter key to exit this mode.

As the arrow keys are tapped, the computer beeps each time the volume increases or decreases in decibel range.

Using the Touchscreen

Tap the  | Settings | Control Panel | Audio icon.

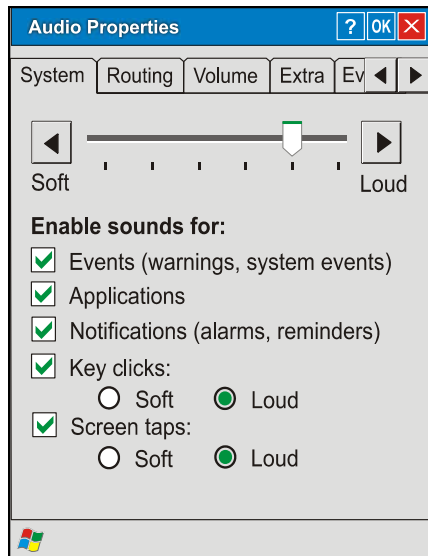


Figure 18 Audio Properties and Speaker Location

Tabs	Actions
System	Moving the slider between Soft and Loud adjusts the speaker volume. Enable or disable sounds for each function by tapping the check boxes.
Routing	Use these options to determine where the audio output goes. Enable or disable the headset and speaker, and microphone gain.
Volume	As the volume scrollbar is moved between up and down for System volume, the computer beeps each time the volume increases or decreases in decibel range.
Extra	As the volume scrollbar is moved between up and down, the computer beeps each time the volume increases or decreases in decibel range for Bay Digital, CRMA Radio and Mixer volume.
Events	Choose sounds to play for Windows CE events or create your own sound scheme.

Troubleshooting Volume Adjust

A <Blue+V> key press sequence puts the MX5X in 'Volume Adjust' mode.

<Shift+Blue+Shift> puts the unit in 'Blue' Mode which, when followed by '<V>', puts the unit in 'Volume Adjust' mode as well.

If the MX5X is responding to touch input, but does not respond to keypad (hard or soft) input, the MX5X may still be in Volume Adjust mode.

Press Enter to cancel (exit) Volume Adjust mode. After pressing enter, the MX5X should start responding to key input.

Saving Settings

When returning from a Cold Reset the previously saved (or original if this is the first Cold Reset) registry savings are reloaded.

When you want to save the registry without having to reset the MX5X:

Double-tap the RegSave file (located in the Windows folder).

The RegSave utility creates the RegTemp.reg registry backup file. The registry is reloaded from the RegTemp.reg file after a Cold Reset.

The registry save process takes 5 – 10 seconds. It is also saved after each Resume from Suspend and each time the OK button is tapped in Control Panel applets.

Enter Data

You can enter data into the MX5X through several different methods. The Scanner aperture provides barcode data entry, the RS-232 serial port or the IR port are used to input/output data, and the keypad provides manual entry.

Mobile devices with a touch screen and Windows CE software can use a stylus to input data, the COM ports and/or the keypad. An input panel (virtual keyboard) is available in applications that expect keyed input.

Keypad Entry

The keypad is used to manually input data that is not collected otherwise. Almost any function that a full sized computer keyboard can provide is duplicated on the MX5X keypad but it may take a few more keystrokes to accomplish a keyed task. Please refer to *Appendix A - Key Maps* for instruction on the specific keypresses to access all keypad functions.

Almost every key has two or three different functions. The primary alpha or numeric character is printed on the key.

The Orange or Blue keys are pressed when you want to use a 2nd key function. For example, when you press a Blue or Orange key (the 2nd key), then press the key that has the desired second-function key, the second-function key is the *active* key. The specific 2nd character is printed above the corresponding key in either Orange or Blue.

Stylus Data Entry

Note: This section is directed to the MX5X daily user. The assumption is that the mobile device has been configured and the touch panel calibrated by the System Administrator prior to releasing the MX5X for daily use. The touch screen should be calibrated before initial use.

The stylus performs the same function as the mouse that is used to point to and click elements on a desk top computer. The stylus is used in the same manner as a mouse – single tap or double tap to select menu options, drag the stylus across text to select, hold the stylus down to activate slider bars, etcetera.

Hold the stylus as if it were a pen or pencil. Touch an element on the screen with the tip of the stylus then remove the stylus from the screen. The touch screen responds to an actuation force (touch) of 4 oz. (or greater) of pressure.

The stylus can be used in conjunction with the keyboard and scanner and an input/output device connected to a serial port.

- Touch the stylus to the field of the data entry form to receive the next data feed.
- The cursor begins to flash in the field.
- The unit is ready to accept data from either the physical keypad, virtual keyboard, integrated scanner or a scanner connected to the serial port on the cradle, if the scanner applet is configured correctly.

Note: Always use the point of the stylus for tapping or making strokes on the display. Never use an actual pen, pencil or sharp object to write on the touch screen.

Scanner Entry

Read all cautions, warnings and labels **before** using the laser scanner.

To scan with the integrated laser barcode reader, point the laser aperture towards a barcode and press the Scan button. You will see a red laser beam strike the barcode.



Figure 19 Scan Beam

Align the red beam so that the barcode is centered within the beam. The laser beam must cross the entire barcode. Move the MX5X towards or away from the barcode so that the barcode takes up approximately two-thirds the width of the beam.



Figure 20 Scanner LED Location

The Scanner Active LED turns red when the laser beam is on. Following a barcode scan and read the Scanner Active LED turns green for two seconds and the MX5X beeps, indicating a successful scan. If the scan was unsuccessful, the Scanner Active LED turns off and a different beep sequence is heard.

The laser engine and Scanner Active LED automatically turn off after a successful or unsuccessful read. The scanner is ready to scan again after the Scan key (or trigger on the handle if installed) is released, or after the green LED turns off following a successful scan.

Input Panel - Virtual Keyboard

The virtual keyboard is always available. Tap the keyboard icon at the bottom of the screen to put the virtual keyboard on the display. Using the stylus:

- Tap the Shift key to type one capital letter.
- Tap the CAPS key to type all capital letters.
- Tap the áü key to access symbols.



Figure 21 Input Panel / Virtual Keyboard

RS-232 Data Entry

The MX5X accepts input from an RS-232 device connected to either RS-232 port.

*Note: ActiveSync (running on the desktop computer) will not transfer files over the RS-232 connector on the MX5 cradle IF the scanner port is configured for COM 1 External. Refer to **ActiveSync Processes** in Chapter 3 of the **MX5X Reference Guide**.*

Data Entry and Tethered Scanners

Refer to sections titled *Tethered Barcode Scanner Data Entry Using the MX5 Cradle* and *Tethered Scanners and the MX5X*.

Please refer to the tethered scanner manufacturer's user guide for instruction.

Getting Help

All LXE manuals are now available on one CD and they can also be viewed/downloaded from the LXE ServicePass website. Contact your LXE representative to obtain the LXE Manuals CD.

You can also get help from LXE by calling the telephone numbers listed on the LXE Manuals CD, in the file titled *Contacting LXE*. This information is also available on the LXE website's ServicePass page.

Explanations of terms and acronyms used in this manual are located in the file titled *LXE Technical Glossary* on the LXE Manuals CD.

Manuals

This document is one in a series covering the MX5X family of computers:

- For MX5X computers equipped with Microsoft Windows CE Operating Systems:
 - MX5X User's Guide
 - MX5X Reference Guide
 - LXEbook -- MX5X User's Guide
- For MX5 Intrinsically Safe (I-SAFE) computers equipped with Microsoft Windows CE Operating System:
 - MX5 Intrinsically Safe User's Guide
 - MX5X Reference Guide
 - LXEbook -- MX5 I-Safe User's Guide
- For both MX5X computers, the following are interchangeable (except where noted):
 - MX5 Cradle Reference Guide
 - MX5 Multi-charger Reference Guide
 - MX5 Belt Battery System (LXE suggests using this accessory specifically with a Low Temperature MX5X. **Do not use the MX5 Belt Battery System with an MX5-IS in a hazardous location.**)

Accessories

Note: Bluetooth access, Bluetooth modules and Bluetooth Manager are not supported by LXE.

Note: The External Power Supply for MX5X is not approved for sale in China.

MX5X Standard

Note: Items with a Green letter R in the first column are ROHS-compliant. Please contact your LXE representative when ordering ROHS-compliant items as the part number may have changed. Items without the letter R may have received ROHS-compliance after this guide was published.

	Holding Accessories	
R	Strap, Hand, Nylon	MX5A401HANDSTRAP
	Handle, w/wrist strap	MX5A406HANDLE
R	Handle, Neoprene slip-on cover	MX5A407HANDLECOVER
R	Case and strap, MX5X w/o handle	MX5A402CASE1
R	Case and strap, MX5X w/handle	MX5A403CASE2

R	Holster, MX5X w/o handle, w/o belt	MX5A404HOLSTER1
	Holster, MX5X w/handle, w/o belt	MX5A405HOLSTER2
R	Holster, MX5X w/handle, w/o belt	9000A407HOLSTERHAND
R	Belt, Use with Holsters	9200L67
	Belt, Heater Battery, MX5 (US only)	MX5A382HTRBATTBELT
	Charger, Heater Battery Belt, MX5 (US only)	MX5A383BATTBELTCHGR
	Cable, Heater Battery Belt to MX5, 12" (US only)	MX5A053CBLBATTBELT
R	Cable, Heater Battery Belt to MX5, 1.5M (Non-US)	MX5A054CBLBATTBELTWW
Miscellaneous		
R	Stylus, Tethered	9000A507STYLUS
R	Stylus, 6 Pack Replacement, MX5X	MX5A501STYLUS
R	Software, CE .NET 4.2 SDK, MX5X CE	MX5XA505CENET42SDK
Battery Chargers and Battery		
	6 Unit Charger w/ US Power Cable	MX5A385CHGR6US
R	6 Unit Charger w/o US Power Cable	MX5A385CHGR6WW
R	Tool, Battery Removal 5 Pack, MX5	9000A508BATTERYTOOL
R	Battery, Li-Ion	MX5A379BATT
Cradles and Power Supplies		
R	Vehicle Mount Cradle (Power Adapter Required)	MX5A001VMCRADLE
R	Standard Desktop Cradle	MX5A002DESKCRADLE
R	Enhanced Desktop Cradle, MX5	MX5A003EDESKCRADLE
R	Enhanced Desktop Cradle, Ethernet, MX5X CE	MX5A004ETHDESKCRADLE
	Power Supply, AC/DC w/ US Power Cable	MX5A305PSACUS
R	Power Supply AC/DC w/o Power Cable	MX5A305PSACWW
R	Power Supply, 12V, Bare Wire Input, MX5X Output	MX5A306PS12V
	Power Supply, 12V Auto to VM Cradle	MX5A380PSAUTO12VUS
R	Power Supply, 12V Auto to VM Cradle (EU)	MX5A381PSAUTO12VWW
R	Power Supply, 24V-72V, Bare Wire Input, MX5X Output	9000A316PS24V72VMX5
Cables for Cradle and MX5/MX5 Serial Ports		
R	Cable, MX5 to PC RS-232, D26 to DA9F	MX5A051CBLD26DA9F
R	Cable, MX5 to PC USB, D26 to USB	MX5A052CBLD26USB
R	Cable, MX5 D26 to Ethernet RJ45, MX5X	MX5A057CBLETHD26RJ45
R	Cable, MX5 D26 to USB Host Receptacle, MX5X	MX5A058CBLD26USBHOST
Tethered Scanners (requires 3" D26 to DA9M cable)		
R	Cable, MX5X for Powerscan, 3", D26 to DA9M	MX5A055CBL3IND26D9M
R	Scanner, Powerscan, SR, 8' Cbl	8300A326SCNRPWRSR8DA9F
R	Strap with Scanner clip	9000A411SCNRSTRAP
	Scanner, Powerscan, SR, 12' Cbl	8300A327SCNRPWRSR12DA9F

R	Scanner, Powerscan, LR, 8' Cbl	8310A326SCNRPWRLR8DA9F
R	Scanner, Powerscan, LR, 12' Cbl	8310A327SCNRPWRLR12DA9F
R	Scanner, Powerscan, XLR, 8' Cbl	8320A326SCNRPWRXLR8DA9F
	Scanner, Powerscan, XLR, 12' Cbl	8320A327SCNRPWRXLR12DA9F

MX5 ISAFE Device

Note: US and Canada only.

	Holding Accessories	
R	Strap, Hand, Nylon	MX5A401HANDSTRAP
R	Handle, w/wrist strap	MX5A406HANDLE
R	Handle, Neoprene slip-on cover	MX5A407HANDLECOVER
R	Case and strap, MX5X w/o handle	MX5A402CASE1
R	Case and strap, MX5X w/handle	MX5A403CASE2
R	Holster, MX5X w/o handle, w/o belt	MX5A404HOLSTER1
R	Holster, MX5X w/handle, w/o belt	9000A407HOLSTERHAND
R	Belt, Use with Holsters	9200L67
	Miscellaneous	
R	Stylus, Tethered	9000A507STYLUS
R	Stylus, 6 Pack Replacement, MX5X	MX5A501STYLUS
R	Software, CE .NET 4.2 SDK, MX5 CE 5.0	MX5XA505CENET42SDK
R	Rubber dust covers for external data ports. Two covers with tether.	I62-0465-001
	Battery Chargers and Battery	
	6 Unit Charger w/ US Power Cable, 2 Battery Removal Tools	MX5A385CHGR6US
R	Tool, Battery Removal 5 Pack, MX5X	9000A508BATTERYTOOL
R	Battery, Li-Ion	MX5A379BATT
	Cradles and Power Supplies	
R	Standard Desktop Cradle	MX5A002DESKCRADLE
R	Enhanced Desktop Cradle, MX5X (Not ISAFE Approved)	MX5A003EDESKCRADLE
R	Enhanced Desktop Cradle, Ethernet, MX5 CE	MX5A004ETHDESKCRADLE
	Power Supply, AC/DC w/ US Power Cable (Not ISAFE Approved)	MX5A305PSACUS
	Cables for MX5-IS Cradle and MX5/MX5 Serial Ports	
R	Cable, MX5 to PC RS-232, D26 to DA9F	MX5A051CBLD26DA9F
R	Cable, MX5 to PC USB, D26 to USB	MX5A052CBLD26USB
R	Cable, MX5 D26 to Ethernet RJ45, MX5 CE	MX5A057CBLETHD26RJ45
R	Cable, MX5 D26 to USB Host Receptacle, MX5 CE	MX5A058CBLD26USBHOST
	<i>Note: Use MX5A051CBLD26DA9F or MX5A052CBLD26USB cable for ActiveSync communication with MX5X cradles.</i>	

Revision History

Revision D, July 2007

- Notices-Added PowerScan registered trademark information.
- Introduction-Updated *AppLock* application switching instruction to include AppLock Launch function. Updated *Accessories*. Updated *Saving Settings*. Added *MX5X Features*.
- Appendix B – Regulatory Notices and Safety Information-Updated R&TTE CE segment. Added label and text : “Republic of Singapore – LXE Dealer License Number DA103458 complies with IDA Standards.”
- Entire Manual-Changed User Guide title to *MX5X User’s Guide*. Changed name of device to *MX5X* where applicable. DocID did not change. Added *Windows CE 5.0 vs Windows CE .NET 4.2* information or instruction where applicable.

Revision C, October 2006

- Notices - Updated trademark statements.
- Introduction - Quick Start: Updated “Troubleshooting”. Added Multi AppLock activation key instruction “Entering the Multi AppLock Activation Key”.
- Getting Help - Manuals: Noted obsolescence of MX5 PPC device. Updated Accessories. Included ROHS information. Updated “Install Handstrap (Optional)”. Added separate accessory sections for MX5 CE .NET standard and MX5 CE .NET I-SAFE mobile device. Added “Revision History”.
- Appendix B - Added Regulatory and Safety information for LXE Summit device. Added Declaration of Conformity for LXE Summit device. Updated FCC statement to 2006 requirements.
- Graphics Only - Corrected Microsoft logo on front page. Edited figures to show equipment with new LXE logo.

Revision B, October 2005

- Notices - Added WEEE statement. Added WEEE statement to Appendix B also.
- Introduction - Added the following note: Bluetooth access, modules and Bluetooth Manager are not supported by LXE. Added explanatory note to “Tapping the Touchscreen with a Stylus” right mouse click function. Removed headset with microphone from “Accessories”. Added Neoprene trigger handle cover to “Accessories”.
- Appendix A - Key Maps - Added clearer pictures and 3270/5250 keypress sequences.

Revision A, Initial Release, January 2005

MX5X Hand Held Computer

Touchscreen



Figure 22 Touchscreen

The Touchscreen is an Active Color LCD unit capable of supporting QVGA graphics modes. Display size is 320 x 240 pixels in portrait orientation. The covering is designed to resist stains. The touchscreen allows signature capture and touch input. A pen stylus is included. The touchscreen responds to an actuation force (touch) of 4 oz. of pressure (or greater).

The color display has a CCFL (Cold-Cathode Fluorescent Lighting) front light. When off, the display appears to have a greenish hue.

Display and Keypad Backlight Timer

The Backlight is turned On when the unit returns from Suspend Mode. The display backlighting feature is programmable and activates based on power source and amount of idle time before entering the Suspend state.

See the section titled *Set the Display / Keypad Backlight Timer* in the previous section *Quick Start*.

Touchscreen Calibration

If the MX5X is not responding properly to pen touch taps, the touchscreen may need to be recalibrated. Contact your System Administrator for assistance.

To recalibrate the touchscreen, tap the  | **Settings** | **Control Panel** | **Stylus** | **Calibration**.

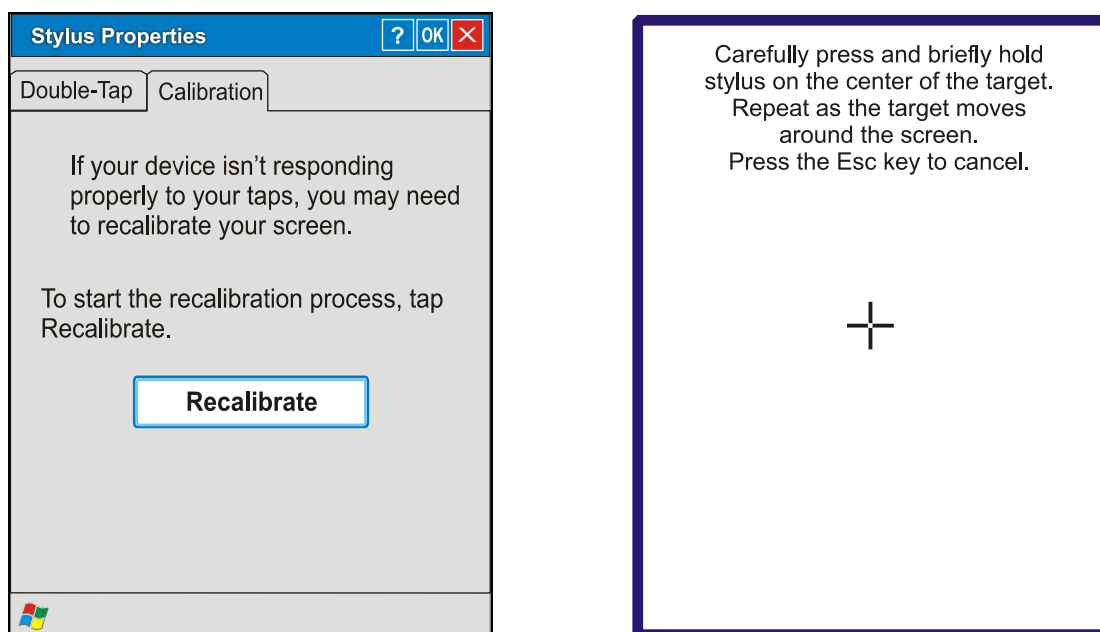


Figure 23 Stylus Properties / Calibration Start / Calibration Begin

To start, tap Recalibrate. Follow the instructions on the screen and press the Enter key to save the new calibration settings or press <Esc> to cancel or quit.

See the *MX5X Reference Guide* for complete instructions.

Cleaning the Glass Display/Scanner Aperture

Note: These instructions are for components made of glass. If there is a removable protective film sheet on the display screen, remove the film sheet before cleaning the screen.

Keep fingers and rough or sharp objects away from the scan aperture and touch display. If the glass becomes soiled or smudged, clean only with a standard household cleaner such as Windex(R) without vinegar or use Isopropyl Alcohol. Do not use paper towels or harsh-chemical-based cleaning fluids since they may result in damage to the glass surface. Use a clean, damp, lint-free cloth. Do not scrub optical surfaces. If possible, clean only those areas which are soiled. Lint/particulates can be removed with clean, filtered canned air.

Programmable Buttons



Figure 24 Programmable Buttons

The Scan buttons can be programmed by the System Administrator to perform the following functions:

Disabled	Key press has no effect.
Scan	Pressing this key activates the laser scanner.
Enter	Pressing this key confirms a forms entry or transmits information. See the following section titled <i>Enter Key Function</i> .
Tab	Pressing this key moves the cursor to the next input field.
Field Exit	IBM 5250/TN5250 units only. Pressing this key exits an input field. See the following section titled <i>Field Exit Key Function</i> .
Esc	Pressing this key cancels the current operation.

How To: Program the Scan Buttons

Access: the  | **Settings | Control Panel | Scanner | Key tab**

Tap the desired radio button. Tap OK to close this menu option. Tap X to cancel changes. Any changes made are in effect immediately.

The default setting for the right button is Enter. The default setting for the left button is Enter.

When the MX5X does *not* have an integrated scanner, both buttons default to Enter keys and the Scan selection is greyed out. The buttons can be programmed to perform other functions when there is no internal scanner.

See the *MX5X Reference Guide* for complete instructions.

COM Ports

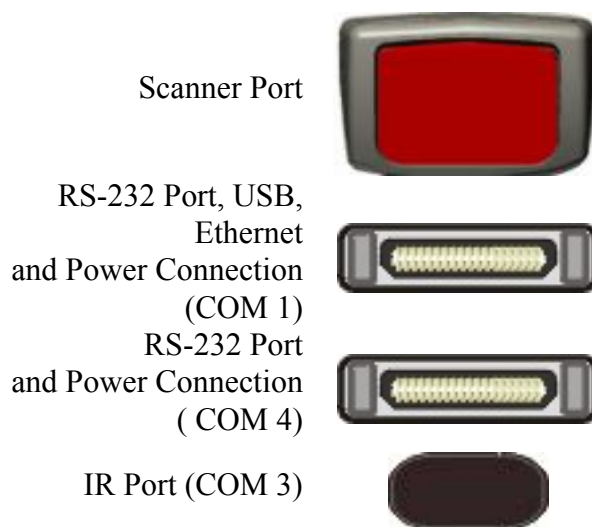


Figure 25 COM Ports

COM 1 port is always the left port on the base of the MX5X. COM 1 port accepts RS-232, USB, Ethernet and AC power connection.

The RS-232 port on the docking cradle is 'connected' to the MX5X when a tethered scanner is connected to the RS-232 port on the MX5 cradle, and the MX5X is in the cradle. The cradle must be powered by an alternate AC or DC power source to enable tethered scanner use.

The **COM 3** port is always the IR port on the base of the MX5X.

COM 4 is always the right port on the base of the MX5X. COM 4 port accepts RS-232 and AC power connectors.

To edit Scanner Com Port parameters, tap the  | **Settings** | **Control Panel** | **Scanner**. Change the parameter values and tap OK to save the changes.

The Ethernet port is on the Enhanced Desktop Cradle with Ethernet Port.

Tethered Scanners and the MX5X

LXE cable number MX5A055CBL3IND26D9M must be used with PowerScan® SR, LR and XLR tethered scanners connected directly to the MX5X device. Do not connect Symbol® tethered scanners to the MX5X device or to this cable.

Both PowerScan and Symbol tethered scanners will send scanned data to the MX5X when the MX5X is in the cradle and the scanners are connected to the RS-232 port on the powered cradle. The MX5X Scan buttons have no effect on tethered scanners. Pressing the trigger handle on tethered scanners sends the data from the tethered scanner to the MX5X.

To set the MX5X to use a tethered scanner, tap the  | **Settings** | **System** | **Scanner** | **Main** tab. Click the **Send Key Messages (WEDGE)** checkbox. The COM port that accepts the scanner data can be configured for data rate, parity, stop bits and data bits using the COM1 tab.

USB Port

The serial port/USB port also supports serial data transfer (using a null modem cable) and USB I/O at 1.5 Mbps. The MX5X automatically detects the cable configuration. Host and client is automatically configured based on the type of cable used. Refer to section titled *Accessories* in this guide for part numbers for the DB26-USB cable and the null modem cable.

IR Port

The InfraRed (IR) port provides a means of transferring information to a device with a similar port and the proper software. The IR port can be used to communicate with printers or a host computer with the use of an adapter.

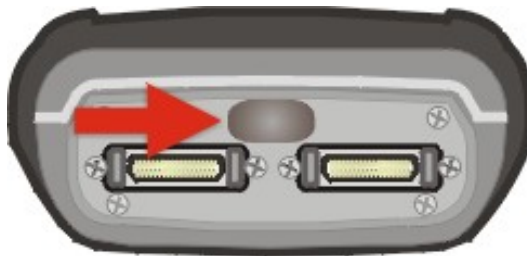


Figure 26 IR Port on MX5

The IR Port is specified as COM 3 and is a bi-directional half-duplex infrared port. It supports the Slow IrDA (Infrared Data Access) PHY Layer standard that allows communication speeds up to 115k baud.

When sending data through the IR port to a separate device's IR port, make sure both units are in close proximity to each other. The IR operating envelope has a distance range of 2 cm (.79 inches) to 15 centimeters (6 inches) with a viewing angle of 30 degrees.

See the *MX5X Reference Guide* for complete instructions.

The Keypad

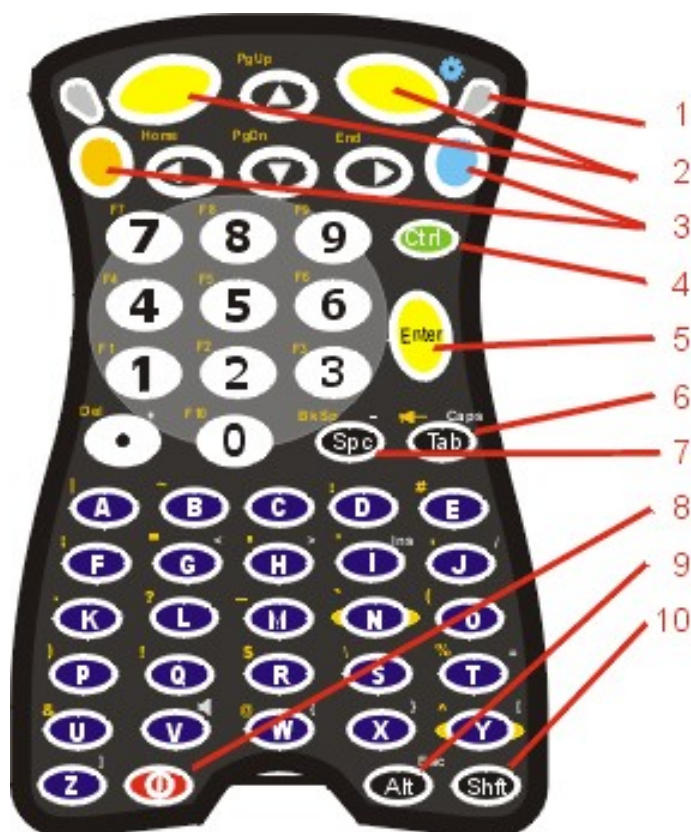


Figure 27 The ANSI / Batch Regular Keypad

1	Scanner Active LED	6	Tab
2	Left and Right Scan	7	Spc
3	Blue and Orange 2 nd Function Key	8	Power Key
4	Ctrl	9	Alt
5	Enter	10	Shift

The keymaps (keypress sequences) are located in *Appendix A - Key Maps*.

Scan Key Function



When programmed as Scan keys, either the left or right Scan key activates the scanner. The internal scanner scans only when the Scan button is pressed (or when the scan trigger is pressed on the optional trigger handle, if installed).

Enter Key Function



The Enter key is used to confirm a forms entry or to transmit information. How it is used is determined by the application running on the computer.

2nd Key Function



The Orange (*on the upper left side of the keypad*) and Blue (*on the upper right side of the keypad*) keys are 2nd keys used to activate the 2nd functions of the keypad. Printed above many keys are small characters, in either orange (on the left side of the key) or blue (on the right side of the key), that represent the 2nd function of that key. Using the 2nd key activates the second key function. Note that the 2nd key only stays active for one keystroke. Each time you need to use the 2nd function you must press the Orange or Blue 2nd key. To cancel a 2nd function before pressing another key, press the 2nd key again.



Ctrl Key Function



The Ctrl key enables the control functions of the keypad. This function is similar to a regular keyboard's Control key. Note that the Ctrl key only stays active for one keystroke. Each time you need to use a Ctrl function, you need to press the Ctrl key before pressing the desired key.

Alt Key Function



The Alt key enables the alternate functions of the keypad. This function is similar to a regular keyboard's Alt key. Note that the Alt key only stays active for one keystroke. Each time you need to use an alternate function, you need to press the Alt key before pressing the desired key.

Shft Key Function



The Shft key enables the shifted functions of the keypad. This function is similar to a regular keyboard's Shift key. Note that the Shift key only stays active for one keystroke. Each time you need to use a Shifted function, you need to press the Shft key before pressing the desired key.

When the Shft key is pressed the next key is determined by the major key legends, i.e., the alpha keys display lower case letters -- when CAPS is On alpha characters are capitalized. For example, when CAPS is On and the Shft key and the G key are pressed, a lower case g is displayed.

Spc Key Function



The Spc key adds a space to the line of data on the display. This function is similar to a regular keyboard's Spacebar. Note that the Spc key only stays active for one keystroke.

Field Exit Function



IBM TN5250 specific keypad only. The left Scan key can be programmed as a Field Exit key. The Field Exit key is used to exit an input field. If the field is an Auto Enter field, the auto transmit function is activated. Refer to the *Programmable Buttons* section for instruction.

Mode Key Functions

Caps Key and CapsLock Mode



This function is similar to a regular keyboard's CapsLock key. Note that the CapsLock mode stays active until the CapsLock key sequence is pressed again. Each time you need to use a Caps function, you need to press the Caps key sequence first. To cancel a CapsLock function press the Caps key sequence again.

The CapsLock key sequence is Blue key then the <Tab> key.

- No CapsLock AND No Shift keypress – result is a lowercase letter.
- CapsLock OR Shift – result is an uppercase letter.
- CapsLock AND Shift keypress – result is a lowercase letter.

A Capital A is displayed in the taskbar when the device is in CapsLock mode or the Caps Key has been pressed and the next key (to be capitalized) has not been pressed.

Keypress Sequences

See *Appendix A - KeyMaps* for key maps for all keypads.

Accessing Files on the CompactFlash Card

Double tap **My Computer** then select **System**. Files stored on the CompactFlash (CF) card are listed.

External Power Supply for MX5X and Cradles

The MX5X DC adapter can be plugged into either of the D26 pin connectors on the bottom of the MX5X.

The cradle power jack is located on the back of the cradle. The MX5X is to be used with a power supply.



Figure 28 AC/DC 12V Power Supply

When the MX5X is receiving power through a cradle connected to external power, the cradle's Status LED is illuminated.

Batteries

Note: On first use the MX5X batteries should be charged with an external power source (i.e. AC Adapter) – 3 hours for the main battery and 7 hours for the backup battery. New main battery packs alone must be charged prior to first use -- this process takes up to four hours in an LXE MX5 Multi-Charger.

The MX5X computer is designed to work with a Lithium-Ion (Li-ion) battery from LXE. Under normal conditions it should last approximately eight to ten hours before requiring a recharge. The more you use the scanner or the RF transmitter, the shorter the time required between battery recharges. The MX5X keeps date and time valid for a minimum of four days using a fully charged backup battery and a main battery that has reached the Low Warning point.

About Lithium-Ion Batteries

Li-Ion batteries (like all batteries) gradually lose their capacity over time (in a linear fashion) and never just stop working. This is important to remember -- the MX5X is always 'on' even when in the Suspend state and draws battery power at all times. Tap the  | **Settings** | **Control Panel** | **Power** tab to check the battery status and power reading.

The following chart is an approximation. Actual battery capacity will vary based on usage, ambient temperature and peripherals drawing power from the MX5X:

100% capacity	2800 mAh minimum
80% capacity	2240 mAh minimum

Deciding when to put a fully charged main battery pack in the MX5X is difficult to quantify because it is very application specific. 1000 mAh may be the cutoff for one customer who uses the computer frequently, while 500 mAh may be perfectly fine for a customer who occasionally uses the computer. You need to determine the point at which battery life becomes unacceptable for your business practices and replace the main battery pack before that point.

Main Battery

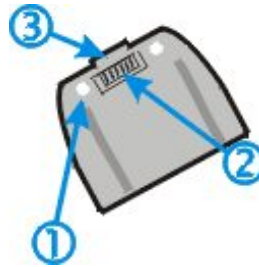


Figure 29 Main Battery

1. Retaining Screws
2. Contacts, Battery Charger
3. Retaining Clip

The main battery has a rugged plastic enclosure that is designed to withstand the ordinary rigors of an industrial environment. Exercise care when transporting the battery making sure it does not come in contact with excessive heat or any power source other than an LXE MX5 Multi-charger or MX5X unit. The fasteners are connected to the main battery pack and remain with the Battery Pack through its life cycle. Contact your LXE representative if the fasteners must be replaced for any reason.

Backup Battery

A fully charged Nickel Metal Hydride (NiMH) coin cell backup battery provides power to the unit for up to 24 hours when the main battery has been depleted, removed or has failed. The backup battery requires no user intervention. Replacement is performed by LXE. LXE recommends an MX5X in storage have a charged main battery pack installed.

Note: This mobile device's backup battery maintains its charge by drawing power from the main battery pack. Always store unused devices with a fully charged main battery pack installed. LXE recommends an in-use mobile device be frequently connected to an external power source to retain optimum power levels in the main battery pack and the backup battery. When the backup battery and main battery pack are dead, the mobile device reverts to setup defaults when a fully charged main battery pack is installed and the device is powered On again.

Battery Hot-Swapping

Replace the main battery pack after first pressing the power key and placing the MX5X in Suspend Mode. LXE recommends any work in progress be saved prior to replacing the main battery pack.

Simply replace the discharged main battery with a fully-charged main battery. The backup battery will retain data during a main battery hot-swap.

Place the battery in the battery well, making sure the tabs on the bottom of the battery pack fit into the slots at the bottom end of the battery well. Push the battery down into the battery well while fastening the screws. Fasten the screws tight enough to allow the rubber gasket to create a watertight seal. If the screws do not easily twist into the threaded opening, remove the battery and repeat the process.

Warning: Never replace the main battery in a hazardous location.

Checking Battery Status

Tap the  | **Settings** | **Control Panel** | **Power** | **Status** tab to view the current charge status of the main battery. If the status is shown as Very Low, charge or replace the battery immediately. For best results, it is recommended that the MX5X use external power whenever available. Charge the main battery pack in the MX5X at the end of each work day.

The backup battery charge status is not displayed because it is constantly changing (and constantly charging when the MX5X is connected to external power).

Tap the  | **Settings** | **Control Panel** | **Power** | **Status** tab to view main battery pack power level, status, charge remaining, date installed and total time the battery pack has been used, and other technical details.

Tap the  | **Settings** | **Control Panel** | **Power** | **Battery** tab to view technical information, serial number of the main battery, and other technical details.

Battery Status LEDs

Main Battery Charging	Left GREEN LED slow flashing.
Main Battery Fully Charged	Left GREEN LED stops flashing; is solid ON.
Charge / battery fault	Left GREEN LED has quick double flashes.

Battery Chargers

Charge Battery in LXE MX5 Multi-Charger

The main battery can be charged in the LXE Multi-Charger. The Multi-charger must **not** be used in Hazardous Locations.

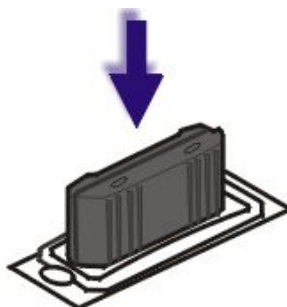


Figure 30 Insert Main Battery in Charging Cup

Insert the main battery into any charging cup in the Multi-Charger. The narrow end goes into the charging cup first. The retaining clip snaps the battery into place in the charging cup. Remove the battery pack by pulling the battery straight up and out.

Do not 'slam' or drop the battery into the charging cup. Failure to follow these instructions can result in damage to the main battery or the Multi-Charger.

Note: The main battery can also be charged in the secondary battery charging pocket in the Desktop cradles. An MX5X does not need to be in the cradle at the time the secondary charging pocket is being used.

LXE Multi-Charger (Optional)



Figure 31 MX5 Multi-Charger

The main battery pack can be charged in the LXE Multi-Charger. Please refer to the *MX5 Multi-Charger User's Guide* for instruction.

The multi-charger requires an external power source before battery pack charging can commence.

The external Power Supply connection for the Multi-charger is shipped with the multi-charger.

The LXE Multi-Charger is not approved for use in a Hazardous Location.

Cradles

Important: The cradles are not designed to secure an MX5X with a protective padded case. The vehicle cradle is not designed to secure an MX5X with a trigger handle. The desktop cradles will secure mobile device's with handstraps or trigger handles.

MX5 docking cradles give the MX5X the ability to communicate with a host computer and other devices. In addition, using wall AC adapters or DC/DC converters, the cradle charges the main battery. The MX5X can be either On or in Suspend mode while in the cradles.

LXE offers three desktop cradles and one vehicle cradle:

- Standard Desktop Cradle
- Enhanced Desktop Cradle
- Enhanced Desktop Cradle with Ethernet Port
- Vehicle Mount Cradle

*Note: LXE offers a device similar in appearance to the MX5X device – the LXE MX5 Pocket PC 2002 device. All MX5 cradles can be used by the MX5s. The Enhanced Desktop Cradle with Ethernet Port, **developed specifically for the MX5X device**, cannot be used by the MX5 Pocket PC 2002.*

Cradle COM port and power cables are available from LXE. The RS-232 connector is located on the back of the cradle. When the MX5X is properly docked, the COM 1 RS-232 interface connects with the DA9 RS-232 port in the cup at the front of the cradle. The cup at the back of the desktop cradles accept a single Battery Pack for charging.

The Ethernet port is located at the back of the Enhanced Desktop Cradle with Ethernet Port.

MX5 cradles are not approved for use in Hazardous Locations.

Tethered Barcode Scanner Data Entry Using the MX5 Cradle

The MX5X supports an accessory barcode label reading device (a tethered scanner) connected to the serial port on a vehicle cradle. Keypad data entries can be mixed with barcode data entries. Any tethered scanner that decodes the barcode internally and outputs an RS-232 data stream may be used. It sends the data to the MX5X in ASCII format.

The serial port parameters may need to be changed to match the parameters of the tethered scanner.

When a tethered scanner is connected to the serial port on a vehicle cradle, the MX5X scanner must be configured as follows:

 | **Settings** | **Control Panel** | **Scanner** | **Main** | either **Port 1** or **Port 2**

Select **COM1 External** on one of the ports. The tethered scanner must be connected to the DB9 port on the vehicle cradle. The cradle must be powered by an alternate AC or DC power source to enable tethered scanner use.

If the tethered scanner is powered by the mobile device, enable Power Output in  | **Settings** | **Control Panel** | **Handheld** | **Comms** tab.

See Also: The *MX5 Cradle Reference Guide* contains cradle installation and technical information.

Appendix A Key Maps

Keypad



Figure 32 ANSI / Batch Keypad

Remember :

The Orange (on the left) and Blue (on the right) keys are '2nd function' keys.

Ctrl, Alt, Shft, Blue and Orange keys are 'sticky keys'. They do not need to be held down before pressing the next (or desired) key. It is valid to use combined modifiers on specific keys.

Key Map 101-Key Equivalencies

Note: This key mapping is used on hand held computers that are NOT running an LXE Terminal Emulator.

When using a sequence of keys that includes the Orange or Blue keys, press the color key first then the rest of the key sequence.

Alphabetic keys default to lower case letters. Press the Shift key, then the alphabetic key for an uppercase letter.

Note: When the computer boots, the default condition of Caps (or CapsLock) is Off. The Caps (or CapsLock) condition can be toggled with Blue plus Tab key sequence.

To Get This Key / Function	Press These Keys and Then ...						Press This Key
	Blue	Orange	Ctrl	Alt	Shift	Caps Lock	
Power / Suspend							Power
Volume Adjust	x						V
Backlight Toggle for Display and Keypad	x						Right Scan Key
Adjust Backlight Brightness Down ⁴		x					7
Blue Mode							Blue
Orange Mode							Orange
Shift							Shift
Alt							Alt
Ctrl							Ctrl
Scan							Left Scan Key or Right Scan Key ⁵
Esc	x						Alt
Space							Spc
Enter							Enter
CapsLock (Toggle)	x						Tab
Back Space		x					Spc
Tab							Tab
BackTab		x					Tab
Break	x						B
Pause	x						P
Print Screen	x						R

⁴ Backlight must be toggled On. Once the backlight is off, the Blue key / Right Scan key sequence toggles the backlight on and at it's brightest intensity.

⁵ Both Scan keys are programmable. Before using as Scan key, make sure key has been programmed to Scan. See section titled *Programmable Buttons*.

To Get This Key / Function	Press These Keys and Then ...						Press This Key
	Blue	Orange	Ctrl	Alt	Shift	Caps Lock	
Scroll Lock	x						S
Up Arrow							Up Arrow
Down Arrow							Down Arrow
Right Arrow							Right Arrow
Left Arrow							Left Arrow
Insert	x						I
Delete		x					DOT
Home		x					Left Arrow
End		x					Right Arrow
Page Up		x					Up Arrow
Page Down		x					Down Arrow
F1		x					1
F2		x					2
F3		x					3
F4		x					4
F5		x					5
F6		x					6
F7		x					7
F8		x					8
F9		x					9
F10		x					0
F11	x						1
F12	x						2
F13	x						3
F14	x						4
F15	x						5
F16	x						6
F17	x						7
F18	x						8
F19	x						9
F20	x						0
F21		x			x		1
F22		x			x		2
F23		x			x		3

To Get This Key / Function	Press These Keys and Then ...						Press This Key
	Blue	Orange	Ctrl	Alt	Shft	Caps Lock	
F24		x			x		4
a							A
b							B
c							C
d							D
e							E
f							F
g							G
h							H
i							I
j							J
k							K
l							L
m							M
n							N
o							O
p							P
q							Q
r							R
s							S
t							T
u							U
v							V
w							W
x							X
y							Y
z							Z
A					x		A
B					x		B
C					x		C
D					x		D
E					x		E
F					x		F
G					x		G

To Get This Key / Function	Press These Keys and Then ...						Press This Key
	Blue	Orange	Ctrl	Alt	Shft	Caps Lock	
H					x		H
I					x		I
J					x		J
K					x		K
L					x		L
M					x		M
N					x		N
O					x		O
P					x		P
Q					x		Q
R					x		R
S					x		S
T					x		T
U					x		U
V					x		V
W					x		W
X					x		X
Y					x		Y
Z					x		Z
1							1
2							2
3							3
4							4
5							5
6							6
7							7
8							8
9							9
0							0
. (DOT)							DOT
<	x						G
[	x						Y
]	x						Z
>	x						H

To Get This Key / Function	Press These Keys and Then ...						Press This Key
	Blue	Orange	Ctrl	Alt	Shft	Caps Lock	
=	x						T
{	x						W
}	x						X
/	x						J
-	x						Spc
+	x						DOT
*		x					I
: (colon)		x					D
; (semicolon)		x					F
. (period)		x					K
?		x					L
`		x					N
_ (underscore)		x					M
, (comma)		x					J
' (apostrophe)		x					H
~ (tilde)		x					B
\		x					S
		x					A
“		x					G
!		x					Q
@		x					W
#		x					E
\$		x					R
%		x					T
^		x					Y
&		x					U
(		x					O
)		x					P

3270 Keypad



Please refer to the *RFTerm Reference Guide* for further information about 3270 key functions on the mobile device.

The MX5X device approved for use in Hazardous Locations has a blue keypad overlay with the same 3270 keymap markings as shown in this figure.

Figure 33 3270 Keypad

Legend	Explanation	Key Sequence
Attn	Attention	Ctrl + A
Clr	Clear	Ctrl + C
Del	Delete	Ctrl + D
Dup	Duplicate	Ctrl + U
E-Inp	Erase Input	Ctrl + Q
Fld –	Field Minus	Ctrl + M
Fld +	Field Plus	Ctrl + L
Ins	Insert	Ctrl + I
LDub	Ctrl + B	Not Supported
RDub	Ctrl + F	Not Supported
NL	New Line	Ctrl + N
PA1	PA1	Ctrl + 1
PA2	PA2	Ctrl + 2
PA3	PA3	Ctrl + 3
Reset	Reset	Ctrl + R
SysReq	System	Ctrl + S

5250 Keypad



Please refer to the *RFTerm Reference Guide* for further information about 5250 key functions on the mobile device.

The MX5X device approved for use in Hazardous Locations has a blue keypad overlay with the same 5250 keymap markings as shown in this figure.

Figure 34 5250 Keypad

Legend Explanation Key Sequence

Attn	Attention	Ctrl + A
Clr	Clear	Ctrl + C
Del	Delete	Ctrl + D
Dup	Duplicate	Ctrl + U
E-Inp	Erase Input	Ctrl + Q
FBk	Fast Back Ctrl + B	Not Supported
FFwd	Fast Forward Ctrl + F	Not Supported
Fld –	Field Minus	Ctrl + M
Fld + ...	Field Plus	Ctrl + L
Ins	Insert	Ctrl + I
NL	New Line	Ctrl + N
SysReq	System	Ctrl + S

Appendix B Regulatory Notices and Safety Information

FCC Information:

This device complies with FCC Rules, part 15. Operation is subject to the following two conditions:

1. This device may not cause harmful interference,
and
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: Changes or modifications to this device not expressly approved by LXE, Inc., could void the user's authority to operate this equipment.

EMC Directive Requirements:

This is a Class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Industry Canada:

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le Règlement sur le brouillage radioélectrique édictés par le ministère des Communications du Canada.

RF Safety Notice (6726 / 6816)**Caution**

This device is intended to transmit RF energy. In accordance with FCC and Industry Canada radio-frequency safety regulations, when operating this device with the Hip-Flip accessory, it should be used in accordance with the user's instructions. Additionally, the user should take care to ensure that a minimum separation distance of 15cm (6 in.) is maintained from the antenna to nearby persons. Use of this device in a manner not consistent with these instructions can increase the risk of RF exposure. This device is not to be co-located with other transmitters.

This device contains transmitter Module FCC ID: KDZLXE4830P

RF Safety Notice (4830)**Caution**

This portable device with its antenna complies with FCC's and Industry Canada's RF exposure limits set for an uncontrolled environment. This equipment has shown compliance with FCC and Industry Canada Specific Absorption Rate (SAR) limits. Highest reported SAR for the MX5X is .307W/kg on body. Any accessories not provided by LXE should not be used with this device. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

Notice:

The long term characteristics or the possible physiological effects of radio frequency electromagnetic fields have not been investigated by UL.

Li-Ion Battery

When disposing of the MX5X main battery, the following precautions should be observed: The battery should be disposed of promptly. The battery should not be disassembled or crushed. The battery should not be heated above 212°F (100°C) or incinerated.

R&TTE Directive Requirements (Applies only to equipment operated within the EU/EFTA)**Information to User**

A label on the exterior of the device should resemble one of the labels shown below (the label contains the LXE part number of the installed radio card). The labels shown below and affixed to the device, identify where the device may be used and where its use is restricted. Use of a device is prohibited in countries not listed below or otherwise identified by the label. (May or may not include the 0560 Notified Body No.)



← LXE Part Number



← LXE Part Number

Complies with
IDA Standards
DA103458

Republic of Singapore - LXE
Dealer License Number
DA103458 complies with IDA
Standards.

MX5X Approvals/Standards

Product	EMI / EMC Standards	Safety Standards
MX5X	FCC Part 15 Subpart B, Class B EN 55022:1998, (CISPR 22:1997) Class B EN 55024:1998 Industry Canada Class B	UL 60950; CSA C22.2 No. 60950 CDRH: 21 CFR 1040.10 and 1040.11 EN 60950 IEC 60825-1 IEC 60950

Transceiver

Transceiver	RF Standards	Notes
4830 (LXE Model No.) LXE 2.4GHz CF with Type II PCMCIA Adapter Card	FCC Part 15.247, Subpart C FCC Bulletin OET-65 EN 300 328 IC-RSS 210 IC-RSS 102	Unlicensed Operation Unlicensed Operation Requires License for Outdoor Use
6726 (LXE Model No.) 2.4GHz Type II PCMCIA Card [Cisco]	FCC Part 15, Subpart C FCC Part 2 EN 300 328 EN 300 826 IC-RSS 139 IC-RSS 102	Unlicensed Operation Unlicensed Operation Requires License for Outdoor Use
6816 (LXE Model No.) 2.4GHz Type II PCMCIA Card [Symbol]	FCC Part 15, Subpart C FCC Part 2 EN 300 328 EN 300 826 IC-RSS 139 IC-RSS 102	Unlicensed Operation Unlicensed Operation Requires License for Outdoor Use



Inspect enclosure for signs of deterioration such as cracking, warping, swelling or softening. Do not use in Hazardous (Classified) Locations if there are any signs of deterioration.



Important: This symbol is placed on the product to remind users to dispose of Waste Electrical and Electronic Equipment (WEEE) appropriately, per Directive 2002-96-EC. In most areas, this product can be recycled, reclaimed and re-used when properly discarded. Do not discard labeled units with trash. For information about proper disposal, contact LXE through your local sales representative, or visit www.lxe.com.

LXE Transceiver LXE 4830 Declaration of Conformity



DECLARATION OF CONFORMITY	
according to Directives:	
1999/5/EC	Radio Equipment and Telecommunications Terminal Equipment and the mutual recognition of their conformity
93/68/EEC	CE Marking Directive
Type of Equipment:	Direct Sequence 2.4 GHz Wireless LAN Card
Brand Name or Trademark:	LXE
Type Designation:	LXE 4830
Manufacturer:	LXE Inc.
Address:	125 Technology Parkway Norcross, GA 30092-2993 USA
Year of Manufacturer:	2006
The following harmonized European Standards, technical specifications, or other normative documents have been applied: EMC: EN 301 489-1: 07-2000 Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements EN 301 489-17 07-2000 Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Wideband data and HIPERLAN equipment Radio: EN 300 328-1 and -2: 2000-7 Radio Equipment and Systems (RES); Wideband transmission systems; Technical characteristics and test conditions for data transmission equipment operating in the 2.4 GHz ISM band and using spread spectrum modulation techniques Safety: EN 60950-1: 2001 Safety of information technology equipment, including electrical business equipment	
We, LXE Inc., declare that the equipment specified above complies with all Essential Health and Safety Requirements of the above Directives and Standards, as amended.	
Place	LXE Inc., Norcross GA USA
Date of issue	23 October 2006
 C. Binnom Jr. RF Approvals Engineer	

LXE Inc. 125 Technology Parkway Norcross, GA 30092-2993 USA
ph. 770/447-4224 fax 770/447-6928

Annex to DoC for LXE 4830

With regard to the use of external antennas

The LXE 4830 can be equipped with external antennas. The antennas listed have been evaluated with the LXE 4830 pursuant to EN 300 328, and therefore meet the definition of 'dedicated antenna' per ERC/REC 70-03 Appendix 1 Table 3; thus the requirement set forth in ERC/REC 70-03 , Annex 3 are met by the LXE model 4830 transceiver.

Dedicated Antennas for use with LXE 4830

<u>LXE P/N</u>	<u>Antenna Gain</u>	<u>Radio Power Level</u>	<u>Antenna Description</u>
153180-0001	2.2 dBi	15.8 dBm	Omni, for LXE VX-series computers
160952-0001	0 dBi	15.8 dBm	Omni, for LXE MX3-series computers
158399-0001	0 dBi	15.8 dBm	Omni, for LXE MX5-series computers
159900-0001	0 dBi	15.8 dBm	Omni, for LXE MX7-series computers
160019-0001	0 dBi	15.8 dBm	Omni, for LXE VX-series computers
160501-0001	0 dBi	15.8 dBm	Omni, for LXE HX1-series computers
161029-0001	0 dBi	15.8 dBm	Omni, for LXE RX2-series computers



C. Binnom Jr.
RF Approvals Engineer
23 October 2006

LXE Inc. 125 Technology Parkway Norcross, GA 30092-2993 USA
ph. 770/447-4224 fax 770/447-6928

LXE Transceiver LXE 6726 Declaration of Conformity



DECLARATION OF CONFORMITY	
according to Directives:	
1999/5/EC	Radio Equipment and Telecommunications Terminal Equipment and the mutual recognition of their conformity
93/68/EEC	CE Marking Directive
Type of Equipment:	Direct Sequence 2.4 GHz Wireless LAN Card
Brand Name or Trademark:	LXE
Type Designation:	LXE 6726
Manufacturer:	LXE Inc.
Address:	125 Technology Parkway Norcross, GA 30092-2993 USA
Year of Manufacturer:	2001
The following harmonized European Standards, technical specifications, or other normative documents have been applied: EMC: EN 301 489-1: 07-2000 Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements EN 301 489-17 07-2000 Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Wideband data and HIPERLAN equipment Radio: EN 300 328-1 and -2: 2000-7 Radio Equipment and Systems (RES); Wideband transmission systems; Technical characteristics and test conditions for data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques Safety: EN 60950-2: 1992 + A1..A4 Safety of information technology equipment, including electrical business equipment	
We, LXE Inc., declare that the equipment specified above complies with all Essential Health and Safety Requirements of the above Directives and Standards, as amended.	
Place	LXE Inc., Norcross GA USA
Date of issue	24 June 2004
 C. Binnom Jr. RF Approvals Engineer	

LXE Inc. 125 Technology Parkway Norcross, GA 30092-2993 USA
ph. 770/447-4224 fax 770/447-6928

Annex to DoC for LXE 6726

With regard to the use of external antennas

The LXE 6726 can be equipped with external antennas. The antennas listed have been evaluated with the LXE 6726 pursuant to ETSI EN 300 328, and therefore meet the definition of 'dedicated antenna' per ERC/REC 70-03 Appendix 1 Table 3; thus the requirement set forth in ERC/REC 70-03 , Annex 3 are met by the LXE model 6726 transceiver.

Dedicated Antennas for use with LXE 6726

<u>LXE P/N</u>	<u>Antenna Gain</u>	<u>Radio Power Level</u>	<u>Antenna Description</u>
153180-0001	0 dBi	17 dBm	Omni, for LXE VX-series computers
155522-0001	0 dBi	17 dBm	Omni, for LXE MX1-series computers
155814-0001	0 dBi	17 dBm	Patch, for LXE MX1-series computers
157368-0001	0 dBi	17 dBm	Patch, for LXE MX3-series computers
157399-0001	0 dBi	17 dBm	Omni, for LXE MX5-series computers
99004-0027	0 dBi	17 dBm	3 dB Omni, for LXE model 2325 computer
DAC2450CT1 (Toko P/N)	2.15 dBi	17 dBm	Omni, for LXE MX2-series computers
153179-0001	0 dBi	17 dBm	Omni, Access Point Antenna
153325-0001	0 dBi	17 dBm	Omni, Access Point Antenna
480424-0400	0 dBi	17 dBm	Omni, Access Point Antenna
153599-0001	3 dBi	17 dBm	Omni, Access Point Antenna
153600-0001	3 dBi	17 dBm	Omni, Access Point Antenna
480424-3404	3 dBi	17 dBm	Omni, Access Point Antenna
155846-0001	3 dBi	17 dBm	Spire® Access Point Antenna
155845-0001	6 dBi	13 dBm	Spire® Access Point Antenna
155311-0001	6 dBi	13 dBm	Patch, Access Point Antenna
480424-3411	6 dBi	13 dBm	Patch, Access Point Antenna
480424-3402	6 dBi	13 dBm	Patch, Access Point Antenna
481246-2400	6 dBi	13 dBm	Patch, Access Point Antenna
480424-1702	6 dBi	13 dBm	180° Directional, Access Point Antenna
480424-0411	9 dBi	7 dBm	Omni, Access Point Antenna
480429-2703	12 dBi	7 dBm	90° Directional, Access Point Antenna
480429-0411	12 dBi	7 dBm	Omni, Access Point Antenna
460601-3020	15 dBi	3 dBm	YAGI, Access Point Antenna
460602-3020	15 dBi	3 dBm	YAGI, Access Point Antenna
480429-0415	15 dBi	3 dBm	Omni, Access Point Antenna



C. Binnom Jr.
RF Approvals Engineer
24 June 2004

LXE Inc. 125 Technology Parkway Norcross, GA 30092-2993 USA
ph. 770/447-4224 fax 770/447-6928

LXE Transceiver LXE 6816 Declaration of Conformity



DECLARATION OF CONFORMITY according to: the R&TTE Directive; 99/5/EEC The EMC Directive; 89/336/EEC The Low Voltage Directive; 73/23/EEC and the Marking Directive; 93/68/EEC	
Type of Equipment: Brand Name or Trademark: Type Designation: Manufacturer: Address:	DSSS 2.4GHz WLAN Radio Card LXE 6816 LXE Inc. 125 Technology Parkway Norcross, GA 30092 USA
The following harmonized European Norms have been applied:	
EMC Standards: EN 301 489-1: 07-2000 Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements EN 301 489-17:07-2000 Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Wideband data and HIPERLAN equipment EN 55022: 1998 Limits and methods of measurement of radio disturbance characteristics of information technology equipment	
Radio Standards: EN 300 328-1 and -2: 2000-7 Radio Equipment and Systems (RES); Wideband transmission systems; Technical characteristics and test conditions for data transmission equipment operating in the 2.4 GHz ISM band and using spread spectrum modulation techniques	
Safety Standard: EN60950-1: 2001 Safety of information technology equipment, including electrical business equipment	
The product carries the CE Mark:	
We, LXE Inc., declare that the equipment specified above complies with all Essential Health and Safety Requirements of the above Directives and Standards, as amended.	
Date of issue: June 18, 2003	
 Cyril A. Binnom Jr. Regulatory Engineer	

LXE Inc. 125 Technology Parkway Norcross, GA 30092-2993 USA

ph. 770/447-4224 fax 770/447-6928

Annex to DoC for LXE 6816

With regard to the use of external antennas

The LXE 6816 can be equipped with external antennas. The antennas listed have been assessed with the LXE 6816 pursuant to EN 300 328, and therefore meet the definition of 'dedicated antenna'. The table below lists the maximum output power setting for the radio module in order to result in a total EIRP of 100mW or less. Any combination of output power and a specific type of antenna resulting in an EIRP greater than 100mW is illegal for use throughout the Community and is outside the scope of this DoC. Antennas not listed below are also outside the scope of this DoC.

Dedicated Antennas for use with LXE 6816

LXE Antenna Part Number	LXE Model Number	Antenna Gain	Max Radio Power Level	Antenna Description
153180-0001	N/A	2.2 dBi	17 dBm	Cushcraft Omni Antenna
155846-0001	6000A279ANT3SPIREL 6000A280ANT3SPIRER 6000A283ANT3INDSPR	3 dBi	17 dBm	Spire® Omni Antenna
155845-0001	6000A277ANT6SPIREL 6000A278ANT6SPIRER 6000A282ANT3INDSPR	6 dBi	13 dBm	Spire® Omni Antenna
480424-0411	N/A	9 dBi	11 dbm	Mobile Mark Omni Antenna
155104-0001	N/A	0 dbi	20 dbm	LXE Omni
154591-0001	N/A	0 dbi	20 dbm	LXE Patch
Toko DAC2450CT1	N/A	0 dbi	20 dbm	LXE Omni
157368-0001	N/A	0 dbi	20 dbm	LXE Omni
158586-0001	N/A	0 dbi	20 dbm	LXE Omni
158399-0001	N/A	0 dbi	20 dbm	LXE Omni



Cyril A. Binnom Jr.
Regulatory Engineer
18 June 2003

LXE Inc. 125 Technology Parkway Norcross, GA 30092-2993 USA
ph. 770/447-4224 fax 770/447-6928

Declaration Of Conformity

LXE

DECLARATION OF CONFORMITY according to: the R&TTE Directive; 99/5/EEC The EMC Directive; 89/336/EEC The Low Voltage Directive; 73/23/EEC and the Marking Directive; 93/68/EEC	
Type of Equipment:	DSSS 2.4GHz WLAN Radio
Brand Name or Trademark:	LXE
Type Designation:	MX5X with 802.11b/g radio
Manufacturer:	LXE Inc.
Address:	125 Technology Parkway Norcross, GA 30092 USA
The following harmonized European Norms have been applied: EMC Standards: EN 301 489-1: 07-2000 Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements EN 301 489-17:07-2000 Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Wideband data and HIPERLAN equipment EN 55022: 1998 Limits and methods of measurement of radio disturbance characteristics of information technology equipment Radio Standards: EN 300 328-1 and -2: 2000-7 Radio Equipment and Systems (RES); Wideband transmission systems; Technical characteristics and test conditions for data transmission equipment operating in the 2.4 GHz ISM band and using spread spectrum modulation techniques	
The product carries the CE Mark: 	
We, LXE Inc., declare that the equipment specified above complies with all Essential Health and Safety Requirements of the above Directives and Standards, as amended.	
Date of issue: July 30, 2006	
 Cyril A. Binnom Jr. Approvals Engineer	



A/C Power Supply Safety Statement – MX5X Output Rated 12 VDC, 3.75 A.



Note: The External Power Supply for MX5X is not approved for sale in China.

Optional A/C Power Supply:

Outside North America, this unit is intended for use with an IEC certified ITE power supply with output rated as stated at the top of this page. (US)

Alimentation c.a. optionnelle:

Hors de l'Amérique du Nord, cette unité est conçue pour être utilisée avec une alimentation ITE certifiée CEI de sortie nominale indiquée au haut de cette page. (FR)

Valgfrit vekselstrømforsyning

Udenfor Nord Amerika er denne enhed udstattet med en IEC (international elektronisk Kommission) udfærdiget med en ITE strømfor syning med strømudgang som fastslået på denne sides begyndelse. (DK)

Vaihtohe ttoinen vaihtovirran syöttölaite:

Pohjois-Amerikan ulkopuolella tämä laite on tarkoitettu käytettäväksi sellaisen IEC:n sertifioiman ITE-tehonsyöttölaitteen kanssa, jonka antoteho on tämän sivun yläosassa esitetyn mukainen. (FI)

Optionales Netzteil (Wechselstrom)

Außerhalb Nordamerikas sollte diese Einheit über ein der IEC-Norm entsprechendes ITE-Netzteil gespeist werden, und zwar mit einer wie oben auf dieser Seite genannten Ausspeisung. (DE)

Προαιρετική Τροφοδοσία Συνεχούς Ρεύματος

Εκτός Β. Αμερικής, η μονάδα αυτή προορίζεται για χρήση με ένα τροφοδοτικό ITE πιστοποιημένο κατά IEC με ονομαστική ισχύ όπως δηλώνεται στην αρχή της σελίδας. (GR)

Alimentazione opzionale a corrente alternata:

Al di fuori dei paesi dell'America del nord, l'unità deve essere impiegata con un dispositivo d'alimentazione per attrezzature informatiche approvato dalla IEC la cui potenza nominale sia pari a quella indicata all'inizio della pagina. (IT)

Vekselstrømforsyning (ekstra utstyr):

Utenfor Nord-Amerika skal dette produktet brukes med en IEC-sertifisert ITE-strømforsyning med klassifisert effekt som angitt øverst på denne siden. (NO)

Fornecimento opcional de CA:

Fora dos EUA, esta unidade destina-se a ser usada com dispositivos de fornecimento de corrente ITE com certificação IEC, com a capacidade indicada no topo desta página. (PT)

Suministro optativo de corriente alterna

Fuera de América del Norte, esta unidad se debe utilizar con un alimentador ITE homologado por la IEC (comisión electrotécnica internacional) con una salida que tenga la calificación que figura en la parte superior de esta página. (ES)

Valfri A/C Strömförsörjning

Utanför Nordamerika är det meningen att denna enheten används med en IEC-certifierad ITE-strömförsörjare med den uteffekt som anges längst uppe på den här sidan. (SE)

İsteğe Bağlı A/C Güç Kaynağı:

Kuzey Amerika dışında, bu ünite, çıkış sınıflandırması bu sayfanın başında belirtilen IEC sertifikalı bir ITE güç kaynağı ile birlikte kullanılmak üzere tasarlanmıştır. (TR)

Updated 10/01/2001

Legend: Danish – DK; English – US; Finnish – FI; French- - FR; German – DE; Greek – GR; Italian – IT; Norwegian – NO; Portuguese – PT; Spanish – ES; Swedish – SE; Turkish – TR.



Laser Light Safety Statement



Warning:

This product uses laser light. One of the following labels is provided on the scanner. Please read the Caution statement. (US)

Mise en garde:

Ce produit utilise un rayon laser. L'une des étiquettes suivantes est apposée sur le scanner. Veuillez lire l'avertissement qu'elle contient. (FR)

Advertência:

Este produto usa luz de laser. O scanner contém um dos seguintes avisos. Favor ler o Aviso. (PT)

Varning:

Denna produkt använder laserljus. En av de nedanstående etiketterna sitter på scannern. Var god läs varningstexten. (SE)

Advarsel:

Dette produkt anvender laserlys. En af følgende mærkater anvendes på scanneren. Læs venligst sikkerhedsforanstaltningen. (DK)

Varoitus:

Tämä tuote käyttää laservaloa. Skannerissa on jokin seuraavista tarroista. Lue Huomio-kohta. (FI)

Warnung:

Dieses Produkt verwendet Laserlicht. Eines der folgenden Etiketten befindet sich auf dem Scanner. Bitte lesen Sie den Gefahrenhinweis. (DE)

Attenzione:

Questo prodotto utilizza luce laser. Una delle etichette seguenti c'è ubicata sullo scanner. Si raccomanda di leggere con attenzione le avvertenze riportate. (IT)

Advarsel:

Dette utstyret bruker laserlys. En av følgende etiketter er plassert på scanneren. Les advarselen på etiketten. (NO)

Advertencia:

Este producto usa luz de láser. Las etiquetas se proveen en la máquina exploradora. Por favor, lea detenidamente la explicación para las precauciones. (ES)

Waarschuwing:

Dit product gebruikt laserlicht. Een van de volgende labels is op de scanner aangebracht. Lees a.u.b. de waarschuwing onder Oppassen. (NL)



Laser Light Safety Statement



Uyarý: Bu ürün lazer ýbýdý kullanýr. Apaðýdaki etiketlerden bir tanesi tarayýcýnýn üstünde saðlanýr. Lütfen Dikkat ifadesini okuyun. (TR)	Προειδοποίηση: Αυτό το προϊόν χρησιμοποιεί λέιζερ φως. Υπάρχει μία από τις ακόλουθες ετικέτες στο σαρωτή. Παρακαλούμε διαβάστε τη δήλωση με τίτλο Προσοχή. (GR)
경고: 본 제품은 레이저 광선을 사용합니다. 다음 라벨 중 하나가 스캐너에 제공됩니다. 주의 사항을 읽어 주십시오. (KR)	警告: この製品はレーザー光線を使用します。 次のラベルのうち1つがスキャナーに 貼られています。 注意事項をお読みください。 (JP)
警告: 本产品使用激光。 下列一个标签将随扫描仪一道提供。 请阅读“当心”一栏的内容。(CN)	Legend: Chinese-CN; Danish-DK; Dutch-NL; English-US; Finnish-FI; French-FR; German-DE; Greek-GR; Italian-IT; Japanese-JP; Korean-KR; Norwegian-NO; Portuguese-PT; Spanish-ES; Swedish-SE; Turkish-TR

Laser Light Labels - MX5X Hand Held Computer Class 2

ENGLISH	COMPLIES WITH 21 CFR 1040.10 EN60825-1:1994 IEC825-1:1993 US LASER LIGHT - DO NOT STARE INTO BEAM CLASS 2 LASER PRODUCT 1.0mW - 640 - 660nm	EN60825-1:1994 IEC825-1:1993 FR RAYONNEMENT LASER NE PAS REGARDER DANS LE FAISCEAU APPAREIL A RAYONNEMENT LASER DE CLASSE 2 1.0mW - 640 - 660nm	FRENCH
DANISH	EN60825-1:1994 IEC825-1:1993 DK LASER LYS KIG IKKE IND I LYSSTRÅLEN KLASSE 2 LASERPRODUKT 1.0mW - 640 - 660nm	EN60825-1:1994 IEC825-1:1993 DE LASERSTRAHLUNG NICHT IN DEN STRAHL BLICKEN LASER KLASSE 2 1.0mW - 640 - 660nm	GERMAN
GREEK	EN60825-1:1994 IEC825-1:1993 GR ΠΗΓΗ ΦΩΤΟΣ LASER ΜΗΝ ΚΟΙΤΑΤΕ ΤΗΝ ΔΕΣΜΗ ΠΡΟΪΟΝ LASER ΚΛΑΣΗΣ 2 1.0mW - 640 - 660nm	EN60825-1:1994 IEC825-1:1993 IT RADIAZIONE LASER NON FISSARE IL FASCIO APPARECCHIO LASER DI CLASSE 2 1.0mW - 640 - 660nm	ITALIAN
NORWEGIAN	EN60825-1:1994 IEC825-1:1993 NO LASER LYS IKKE SE INN I STRÅLEN KLASSE 2 LASER PRODUKT 1.0mW - 640 - 660nm	EN60825-1:1994 IEC825-1:1993 ES LUZ DE LÁSER - NO MIRE DIRECTAMENTE AL HAZ DE LUZ PRODUCTO LÁSER DE LA CLASE 2 1.0mW - 640 - 660nm	SPANISH
TURKISH	EN60825-1:1994 IEC825-1:1993 TR LASER RADYASYON ISINA DOGRU BAKMAYIN CLASS 2 LAZER ÜRÜNÜ 1.0mW - 640 - 660nm	EN60825-1:1994 IEC825-1:1993 NL LASERBESTRALING NIET IN DE LICHTSTRAAL STAREN KLASS 2 LASER PRODUCT 1.0mW - 640 - 660nm	DUTCH
SIMPLIFIED CHINESE	EN60825-1:1994 IEC825-1:1993 CN 激光 - 请勿 注视激光束 二类激光产品 1.0mW - 640 - 660nm	EN60825-1:1994 IEC825-1:1993 PT LUZ DE LASER NÃO OLHE NO RAIO PRODUTO DE LASER DE CLASSE 2 1.0mW - 640 - 660nm	PORTUGUESE
JAPANESE	EN60825-1:1994 IEC825-1:1993 JP レーザー光線 - 光源を 見つめると危険です クラス2レーザー製品 1.0mW - 640 - 660nm	EN60825-1:1994 IEC825-1:1993 SE LASERSTRÅLNING STIRRA EJ IN ISTRÅLEN LASERPRODUKT KLASSE 2 1.0mW - 640 - 660nm	SWEDISH
KOREAN	EN60825-1:1994 IEC825-1:1993 KR 레이저 광 빔을 들여다 보지 마시오 2 등급 레이저 제품 1.0mW - 640 - 660nm	EN60825-1:1994 IEC825-1:1993 FI VAARA LASERSÄTEILYÄ ÄLÄ TUJOTA SÄTEESEEN LUOKAN 2 LASER 1.0mW - 640 - 660nm	FINNISH

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